

Response to Office Action dated 5/16/05
Title: Multiple Engine Test System
Date Filed: 03/09/04

Serial Number: 10/801,171
Inventors: Cline et al.
Attorney Docket No.: NC 96090

REMARKS

Applicants hereby request further examination and reconsideration of the application, in view of the foregoing amendments and following remarks.

Claims 1 and 5 are amended; the engine test bed system is now described as a "removable engine test bed system for holding and testing a specific engine type." Support for this amendment is found in the specification on page 4, lines 14-21. The amended claim also includes the additional language of "the engine test bed system able to rest on top of the mounting frame." Support for this change is found in Figures 1 and 2, and in the specification on page 4, lines 11-12, 17-18.

Section 102 Rejections

Examiner rejected claims 1 and 2 under 35 USC 102(b) as being anticipated by Cascio.

Examiner stated "[w]ith respect to claim 1, Cascio suggests a multiple test system (col. 1, lns 22-26), comprising: a. an engine test bed system (4) for holding a specific engine type, the engine test bed system comprising testing components (22/22a) for the specific engine type; b. a mounting frame (6), the mounting communicating with the engine test bed system (Fig. 1); and c. a handling system (2) for transporting the engine test bed system from storage to the mounting frame (col. 3, lines 8-23)."

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"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdeggal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).¹ Also "anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Lindeman Mashinenfabrik GmbH v. American Hoist & Derrick, Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)(citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)). To anticipate a claim the "identical invention must be shown in complete detail as is contained in the ... claim."²

Amended Claims 1 and 5 include a "removable engine test bed system." The reference cited, Cascio, has no mention, discussion or suggestion of a removable engine test bed system. Cascio describes an invention where the engine test stations (element 6) are stationary, as shown in Figures 1, 2 and 3, and are shown bolted in these Figures. Examiner described element 4 in Cascio as an engine test bed system; however, Cascio describes element 4 as a "pallet" or "base" which can slide along a guide rail (column 3, line 10). The pallet or base is movable (column 1, lines 32-38); however, there is no discussion or suggestion that the base or pallet (or any engine test station) is removable. Furthermore, the pallet does not include items that can test an engine (like a removable engine test bed system which is described and defined on page 4, lines 14-16 of the specification). In addition, Cascio does not describe an apparatus where the engine test bed system is able to rest on top of the mounting frame. Cascio does not appear to describe any type of mounting frame. Examiner described element 6 as a mounting frame; however, Cascio

¹ See MPEP Section 2131.

² See MPEP Section 2131

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describes element 6 as an engine test station (Column 3, lines 16-17), and not a mounting frame. The pallet or base (element 4 of Cascio) does not appear to rest on element 6 (or vice versa), in fact element 6 is shown to be adjacent to the base or pallet. The reference does not describe, mention or suggest a mounting frame or an engine test bed system that can hold and test an engine as described in Amended Claims 1 and 5. In addition, the handling system (element 2) described in Cascio cannot and does not transport an engine test bed system. The handling system of Cascio only transports the engine and the base or pallet.

Section 103 Rejections

Examiner rejected claims 3-12 under 103(a) as being unpatentable over Cascio.

To reject under 35 U.S.C. Section 103, the PTO must establish a prima facie case of obviousness. That is to say, the PTO must make a factual showing that the claimed subject matter as a whole would have been obvious to a person of ordinary skill in the art to which that subject matter pertains at the time the invention was made. To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or modify the reference teaching. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.³

Examiner stated "[w]ith respect to claims 3 and 4, Cascio fails to explicitly teach an exhaust duct that intakes discharge from the engine's exhaust. However, it would be obvious to one having ordinary skill ... to include with Cascio teaching and adjustable exhaust duct..." As to

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Claim 5, Examiner stated "...element 'd' as claimed parallels that of claims 3 and 4 and thus would be obvious..." Cascio does not suggest or motivate a person skilled in the art to make a removable engine test bed system that can hold and test an engine or an engine test bed system that rests on a mounting frame, as described in the Claims. As discussed earlier Cascio has no discussion or suggestion of a mounting frame that can hold an engine test bed system as described in the Amended Claims. Therefore, the reference does not teach or suggest all of the elements described in the claims.

As to Claims 6 and 7, Examiner stated "... Cascio suggests an engine bed system comprising a support beam, a support column... it would have been obvious to one having ordinary skill... to use a plurality of beams, columns, and members." The engine test bed system (element 4) of Cascio cannot hold an engine, as the engine rests on a base (element 4), which is in communication with the engine test bed system. There is no suggestion or motivation to modify Cascio into an engine test station that both holds and tests an engine.

As to Claims 8 and 9, Examiner stated "... Cascio suggests the mounting frame comprising..." As stated earlier, Cascio does not describe a mounting frame that can hold an engine test bed system, specifically one where the engine test bed system can hold an engine and can rest on top of a mounting frame.

As to claim 10 and 12, Examiner stated "...Cascio teaches the handling system comprising a rail system that can transport the engine test bed system and engine." As stated above, in Cascio the engine test station (element 6) is stationary. There is no suggestion or

³ See MPEP Section 2143

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motivation in the reference to transport the engine test bed systems via rails or any other method.

Only the engine and base are shown to be or suggested to be transported in Cascio.

As to Claim 11, as described earlier there is no suggestion or motivation to make an invention as described in this claim.

The applicants respectfully state that the amended claims are not obvious.

In addition, in going from the references to the claimed invention, one cannot base obviousness upon what a person skilled in the art might try or might find obvious to try but rather must consider what the references would have led a person skilled in the art to do. In this case none of the references would have led a person skilled in the art to include an exhaust duct, the configuration of the mounting frame or an overhead hoist, as a mounting frame, exhaust duct or overhead hoist are not described, mentioned or suggested in the Cascio reference. Therefore, Cascio does not teach or suggest Applicants' present invention.

Objective evidence or secondary considerations such as unexpected results, commercial success, long-felt need, failure of others, copying by others, licensing, and skepticism of experts are relevant to the issue of obviousness and must be considered in every case in which they are present.⁴ Establishing long-felt need requires objective evidence that an art recognized problem existed in the art for a long period of time without solution. The relevance of long-felt need and failure of others to the issue of obviousness depends on several factors. First, the need must have been a persistent one that was recognized by those of ordinary skill in the art. *In re Gershon*, 372 F.2d 535, 539, 152 USPQ 602, 605 (CCPA 1967). Second, the long-felt need must not have

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been satisfied by another before the invention by the applicant. *Newell Companies v. Kenney Mfg. Co.*, 864 F.2d 757, 768, 9 USPQ2d 1417, 1426 (Fed. Cir. 1988). Third, the invention must in fact satisfy the long-felt need. *In re Cavanagh*, 436 F.2d 491, 168 USPQ 466 (CCPA 1971).⁵ The United States military forces have been trying to deal with different testing components with different types of engines for a considerable number of years. Prior to Applicants' invention, the United States Navy built and designated test cells and testing areas for each type of engine. This utilized excess space and incurred significant costs. The military has spent significant time and expense to develop an effective system for testing many different types of engines. Prior to Applicants' invention, other methods were either not effective, took up too much space, costly, and not time effective. Attached please find declarations from John W. Davis and Howard Germroth, evidencing long felt need and failure of others. Both Mr. Davis and Mr. Germroth have extensive experience in the art and have been involved in aircraft testing for many years. Both declarations show there existed a long felt need that was persistent and recognized by those of ordinary skill in the art. These declarations also show that the long felt need has not been satisfied by another before the invention by the Applicants, and that the invention satisfied the long felt need.

Additionally, Cascio does not appreciate the existence of the problem solved by the invention. The invention relates to a test bed system that tests different types of engines, specifically aircraft engines (Page 1, lines 17-27). Cascio does not describe a system that can test different types of engines. Cascio describes a system that can do different types of tests (Column 1, lines 26-31) on an engine, but not tests on different engines. Cascio does not address the

⁴ See MPEP 2141

⁵ See MPEP 716.04

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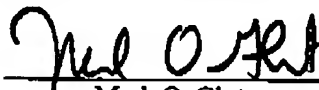
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problem to which the claimed invention is directed, and thus even if considered, would not suggest the invention to one skilled in the art.

Conclusion

In view of the above, it is submitted that the claims are in condition for allowance. Reconsideration and withdrawal of the rejections and objections are requested. Allowance of the claims at an early date is solicited.

Respectfully Submitted,



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